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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/963,381	09/27/2001	Wenling Wang	33082M103	9454

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EXAMINER

HOANG, TU BA

ART UNIT	PAPER NUMBER
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3742

DATE MAILED: 07/30/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/963,381

Applicant(s)

WANG ET AL.

Examiner

Tu Ba Hoang

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,7-9,15,16 and 22-24 is/are rejected.
- 7) ☒ Claim(s) 2-6,10-14 and 17-21 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 September 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 15 and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by Shah et al (US 5,517,594) cited by the Applicant. Shah et al shows a controller (50) for controlling a heat treatment apparatus (10) comprising a heater (20) for heating an object-to-be-processed (12), the controller comprising: a heating controller (32) for controlling the heater in accordance with a temperature recipe stating a relationship between a set temperature and a time (abstract, lines 9-10, i.e., time varying temperature recipe); and a control period determining unit (30) for determining a control period for periodically controlling the heater by the heating controller, based on a change rate of the set temperature (abstract, lines 6-7 and 11-14, i.e., an online reactor model).

Claims 1, 7-9, 16, and 22-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Stoddard et al (US 5,895,596). Stoddard et al shows a heat treatment apparatus comprising: a heater (30) for heating an object-to-be-processed (28); a temperature meter (36,42) disposed in the heater; a temperature estimator (98) for computing an estimated temperature of the object-to-be-processed, based on a temperature metered result of the temperature meter (column 6, lines 30-41); an error estimator (96) for computing an estimation error of the estimated temperature computed by the temperature estimator (column 6, lines 8-21); a temperature corrector (112a-d) shown in Figure 11 for computing a corrected estimated temperature given by correcting the estimated temperature computed by the temperature estimator, based on the estimation error computed by the error estimator; and a heating controller (118) for controlling the heater, based on the corrected estimated temperature computed by the temperature corrector, and a temperature recipe stating a relationship between a set temperature and a time (column 3, line 64 to column 4, line 2 and column 4, lines 11-16), wherein the temperature meter includes a heater vicinity temperature meter (36) for metering a temperature of a heater vicinity, and an object-to-be-processed vicinity temperature meter (42) for metering a temperature of an object-to-be-processed vicinity, and the temperature estimator computes the estimated temperature of the object-to-be-processed, based on a control signal for electric power to be fed to the heater, the heater vicinity temperature metered by the

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heater vicinity temperature meter, and the object-to-be-processed vicinity temperature metered by the object-to-be-processed vicinity temperature meter, and the temperature estimator computes an estimated temperature of the object-to-be-processed vicinity, based on the control signal for electric power to be fed to the heater, and the temperature of the heater vicinity metered by the heater vicinity temperature meter, and the error estimator computes the estimation error, based on the temperature of the object-to-be-processed vicinity given by the object-to-be-processed vicinity temperature meter, the estimated temperature of the object-to-be-processed vicinity computed by the temperature estimator, and the temperature change rate of the set temperature.

Claims 2-6, 10-14, 17-21 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

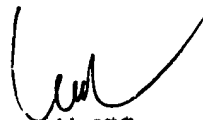
The following is a statement of reasons for the indication of allowable subject matter: the prior art of record does not show or fairly suggest the computation period determining unit for determining a computation period for periodically computing the estimated temperature by the temperature estimator and the estimation error by the error estimator in the manner recited in claims 2, 10, and 17.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: Lam et al (6,175,103) and Morita et al (US 6,060,697).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu Ba Hoang whose telephone number is (703) 308-3303. The examiner can normally be reached on Mon-Fri from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teresa Walberg can be reached on (703) 308-1327. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 872-9301.


Tu Ba Hoang
Primary Examiner

tbh
July 24, 2003